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Adult (19+ years) consumers of added sugars had a lower likelihood of lower uric acid level but no other associations were found with other physiological parameters

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The likelihood of added sugars intake being associated with aberrant values of liver enzymes, cardiovascular risk factors and other physiological parameters was determined using NHANES (2001-2012) data from adults (n=26,402). Dietary intake was determined using 24-hour dietary recalls using an Automated Multiple-Pass Method. The usual intake (UI) of added sugars as a percent of energy was estimated using the Markov Chain Monte Carlo ratio method of the National Cancer Institute. Balanced repeated replication was used for variance estimation. Subjects were separated into six groups: 0 to <5, 5 to ≤10, 10 to ≤15, 15 to ≤20, 20 to ≤25 and ≥25% of energy as added sugars. Logistic regression was used to determine if the different levels of added sugars intake had an odds ratios indicating adverse physiologic outcomes (0 <5% intake was the reference group). Group and linear trends ($p < 0.01$) for the six levels of intake were also determined for: high alkaline phosphatase, alanine aminotransferase, aspartate aminotransferase, gamma-glutamyl transferase, lactate dehydrogenase, blood pressure, high- and low-density lipoproteins, triglycerides, glucose, c-reactive protein, waist circumference and hemoglobin and high or low uric acid levels. Only low uric acid levels showed a significant group trend (17% less likely; $p=0.0083$). However, neither the linear trend nor uric acid levels as a continuous variable were significantly different across added sugars intake. Results suggest that there was a limited association of UI of added sugars with physiologic parameters in adults. Further studies are needed to confirm these findings.

Biography

Carol E O'Neil is a Professor of Nutrition and Food Sciences at the Louisiana State University Agricultural Center. She has nearly 200 publications. For a decade, her research has centered on Nutritional Epidemiology and its relationship to nutrient intake and adequacy, diet quality and the association with cardiovascular risk factors. One of her prinicipal interests has been monitoring the US national representative data set, the National Health and Nutrition Examination Survey.

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